abcam

ab177156

Anti-ERO1L antibody [EPR12474]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 50% Tissue culture supernatant, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR12474
Purity	Tissue culture supernatant

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Predicted

Species	Mouse
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human

Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information ERO1A

Function	Oxidoreductase involved in disulfide bond formation in the endoplasmic reticulum. Efficiently reoxidizes P4HB/PDI, the enzyme catalyzing protein disulfide formation, in order to allow P4HB to sustain additional rounds of disulfide formation. Following P4HB reoxidation, passes its electrons to molecular oxygen via FAD, leading to the production of reactive oxygen species (ROS) in the cell. Required for the proper folding of immunoglobulins (PubMed:29858230). Plays an important role in ER stress-induced, CHOP-dependent apoptosis by activating the inositol 1,4,5-trisphosphate receptor IP3R1. Involved in the release of the unfolded cholera toxin from reduced P4HB/PDI in case of infection by V.cholerae, thereby playing a role in retrotranslocation of the toxin.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Species reactivity
Rat: We have preliminary internal testing data to indicate this antibody may not react with this species.
Please contact us for more information.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	ERO1L also known as ERO1-alpha is a protein involved in the formation of disulfide bonds in the endoplasmic reticulum important for protein folding. The molecular mass of ERO1L is approximately 54 kDa. ERO1L primarily expresses in tissues with high secretory activities such as the liver and pancreas. It plays a vital role in maintaining redox homeostasis within the cell by transferring electrons from protein disulfide isomerase to molecular oxygen.
Biological function summary	ERO1L contributes to oxidative protein folding within the endoplasmic reticulum. As part of a complex it interacts with protein disulfide isomerases to facilitate the introduction of disulfide bonds into nascent proteins. This function is essential for the proper maturation of secreted proteins influencing cellular protein management processes. ERO1L activity impacts cellular responses to stress and influences the capacity of cells to handle unfolded proteins.
Pathways	ERO1L significantly influences the protein folding and endoplasmic reticulum-associated degradation pathway. It has strong associations with protein disulfide isomerase and interacts within the unfolded protein response to manage cellular stress caused by misfolded proteins. The protein contributes to the maintenance of a stable internal environment during conditions where protein folding demands increase.
Associated diseases and disorders	ERO1L shows connections to cancer and neurodegenerative disorders. Aberrant expression of ERO1L can influence tumor growth due to its role in modulating cellular stress responses and managing protein folding in cancer cells. The protein also shows a relationship with neurodegenerative conditions through its involvement in protein misfolding pathways which are critical in diseases like Alzheimer's. ERO1L collaborates with proteins like protein disulfide isomerase and participates in cellular mechanisms underlying these conditions.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

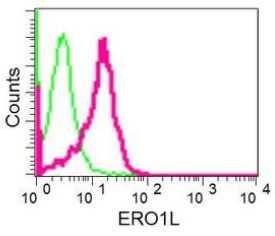
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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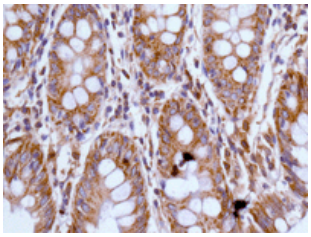
4 product images



Flow Cytometry (Intracellular) - Anti-ERO1L antibody [EPR12474] (ab177156)

ERO1L Flow Cytometry (Intracellular) staining using rabbit Anti-ERO1L antibody

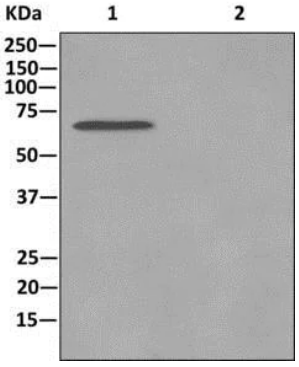
Intracellular flow cytometric analysis of permeabilized HeLacells labeling ERO1Lwith ab177156 at 1/10 dilution (red), or a rabbit IgG (negative) (green).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ERO1L antibody [EPR12474] (ab177156)

ERO1L Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ERO1L antibody

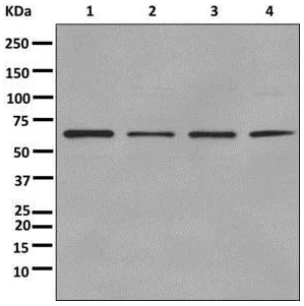
Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling ERO1L with ab177156 at 1/100 dilution.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunoprecipitation - Anti-ERO1L antibody [EPR12474] (ab177156)

Western blot analysis on immunoprecipitation pellet from (Lane 1) HepG2 cell lysate or (Lane 2) 1 X PBS (negative control) using ab177156 and HRP-conjugated anti-rabbit IgG preferentially detecting the non-reduced form of rabbit IgG.
All lanes:
Immunoprecipitation - Anti-ERO1L antibody [EPR12474] (ab177156)

Predicted band size: 54 kDa



Western blot - Anti-ERO1L antibody [EPR12474] (ab177156)

ERO1L Western blot staining using rabbit Anti-ERO1L antibody

All lanes:
Western blot - Anti-ERO1L antibody [EPR12474] (ab177156) at 1/1000 dilution

Lane 1:
HepG2 cell lysate at 10 µg

Lane 2:
293T cell lysate at 10 µg

Lane 3:
MCF-7 cell lysate at 10 µg

Lane 4:
HeLa cell lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP conjugated at 1/2000 dilution

Predicted band size: 54 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.